Version with markings to show changes made

The claims have been amended as follows:

1. (Amended) A process for measuring analyte concentrations by affinity viscosimetry in a liquid known as sensitive to a shear rate applied to said liquid while circulating through an integrated dialysis chamber during a dialysis process, said dialysis process consisting in pumping of [the] a shear sensitive liquid through a liquid conductor for streaming liquids via a flow resistance means with an integrated dialysis chamber and a measuring device for determining viscosity during a measuring process, whereby [the] a maximum shear rate of the sensitive liquid indicated by said viscosimeter measuring device, which occurs at [the] a measuring process, is at least twice the maximum shear rate of the sensitive liquid [occuring] occurring in [the] a dialysis chamber during the dialysis process.

2. (Amended) A viscosimetric affinity sensor for carrying out a process according to claim 1, characterized by a liquid-conductor perfusable by the sensitive liquid and containing a dialysis chamber having a specified tubular lumen and dialysis membrane, a measuring chamber for [the] determining flow resistance and a connected pumping device, whereby the flow resistance of the measuring chamber is [layed] laid out such that the maximum shear rate in the sensitive liquid characterized by a cohesion parameter during the measuring process is more than twice the maximum shear rate [occuring] occurring in the sensitive liquid during the dialysis process.

3. (Amended) A viscosimetric affinity sensor according to claim 2, [characterized by the following peculiarity:] wherein the dialysis chamber is part of a needle-like body.

4. (Twice Amended) A viscosimetric affinity sensor according to claim 2, [characterized by the following peculiarity:] wherein the liquid-conductor contains a pressure sensor.

B

5. (Twice Amended) A viscosimetric affinity sensor according to [one of the] claim 2, [characterized by the following peculiarity:] wherein the measuring chamber is situated within a needle-like body, the dialysis chamber is situated at its surface.

6. (Twice Amended) A viscosimetric affinity sensor according to [one of the] claim 2, [characterized by the following peculiarity:] wherein the sensitive liquid fills the dialysis chamber and the measuring chamber, and borders within the measuring chamber or within an additional chamber to a fluid of low viscosity which is not miscible with water, thereby manifesting a separation interface at a meniscus position between said fluid and said sensitive liquid.

7. (Amended) A viscosimetric affinity sensor according to claim 6, [characterized by the following peculiarity:] wherein the additional chamber contains [one ore] a set of one or more electrodes, by [the help of] which [the] a position of [the] a meniscus between fluid and sensitive liquid can be followed.

8. (Twice Amended) A viscosimetric affinity sensor according to [one of the] claim 2, [characterized by the following peculiarity:] wherein the sensor contains a valve or a valve-like device for interruption of [the] cohesion within the sensitive liquid by introduction of a gas or another fluid with low viscosity, whereby this valve or valve-like device is placed between the dialysis chamber and the measuring chamber or between the dialysis chamber and the pump.

9. (Twice Amended) A viscosimetric affinity sensor according to [one of the] claim 2 [characterized by the following peculiarity: the] wherein the lumen of the dialysis chamber consists of a space between a solid body and the dialysis membrane.

New claims 10-17 have been added as follows:

B

10. (New) A viscosimetric sensor needle, comprising a blind ending dialysis chamber comprising:

a) a hollow fiber;

b) a measuring capillary positioned within said hollow fiber;

c) a capacitance measuring chamber having conducting zones in communication with said measuring capillary;

d) a capacitance measuring device in communication with said conducting zones; and

e) said capacitance measuring chamber and measuring capillary in communication with a pump.

11. (New) The viscosimetric sensor of claim 10, wherein said sensor fits into a cannula for insertion into a matrix.

12. (New) The viscosimetric sensor of claim 11, wherein said matrix is living tissue.

13. (New) The viscosimetric sensor of claim 10, wherein said sensor is attached within a needle body.

14. (New) The viscosimetric sensor of claim 10, wherein said pump is a gas pump.

15. (New) The viscosimetric sensor of claim 14, wherein said gas pump creates a pressure difference of from about -0.09 to about +0.3 Mpa.

16. (New) The viscosimetric sensor of claim 10, wherein said measuring capillary and measuring chamber is filled with a shear sensitive liquid.

17. (New) The viscosimetric sensor of claim 10, wherein said shear sensitive liquid is a mixture of dextran and concanavalin A.

The specification has been amended as follows:

B